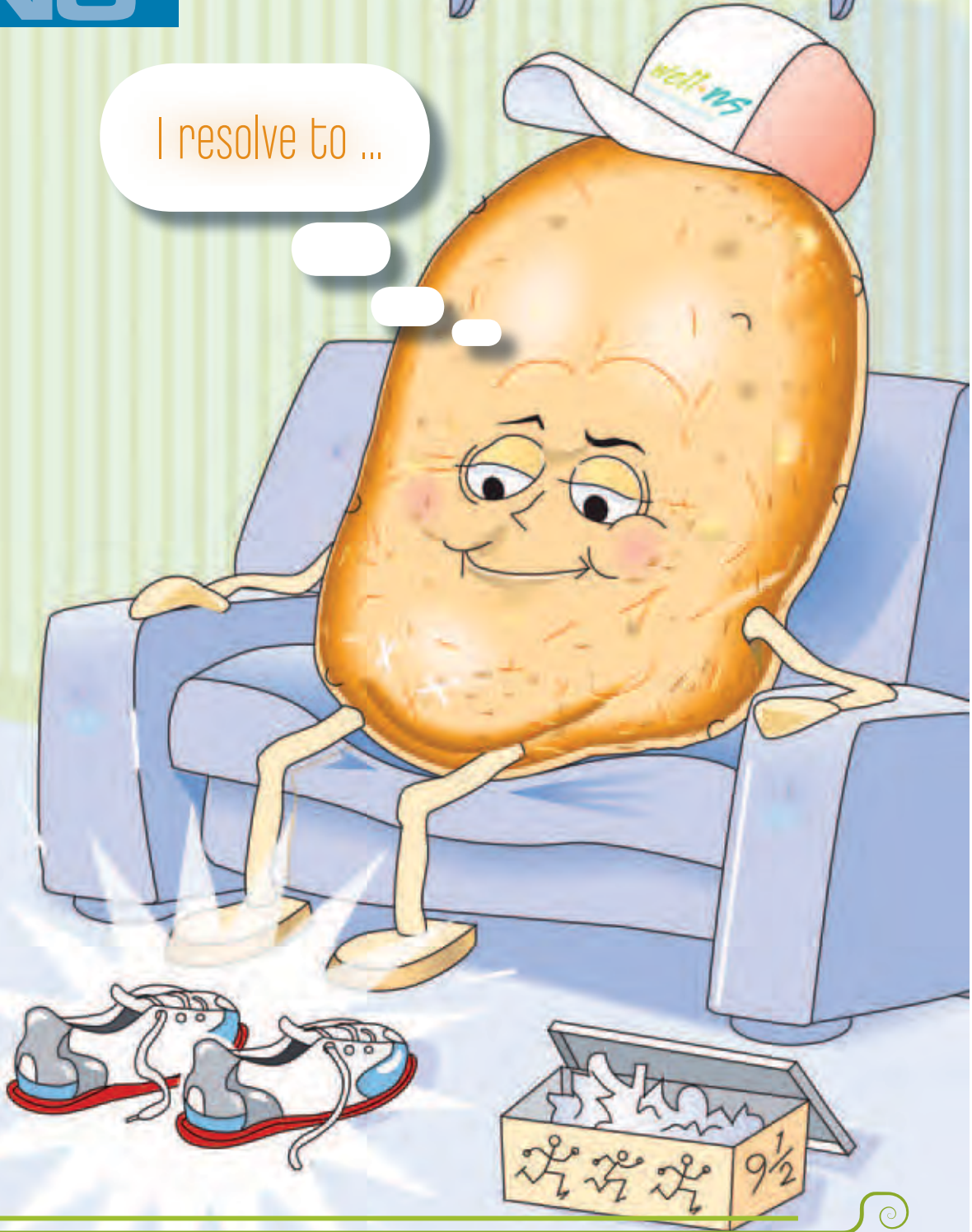


I resolve to ...



Biz NS

Jan/Feb '10

- 1 NEW YEAR'S RESOLUTIONS?
- 2 THE POWER OF NUMBERS
- 4 GET ACTIVE AND TAKE ACTION

5 EATING RIGHT, STAYING FIT, AND LOVING EVERY MINUTE OF IT

6 FAMILY A BIG MOTIVATOR FOR STAYING HEALTHY

7 HAVE YOU CROSSED THE LINE?

9 RAISING THE ROOF ON HEARTLAND

12 NS GEARING UP FOR DOUBLE-STACK BUSINESS

15 TRACK 2012 ON THE MOVE

BACK COVER NS JOINS U.S. GREEN BUILDING COUNCIL



Take a powerful path to a healthier lifestyle



So, did you make a few New Year's health and fitness resolutions? Have you kept them? Norfolk Southern's WellNS program can help you stay on track.

Many resources are available to NS employees and their spouses who want to make positive changes in their lifestyles, according to **Mary Pitman**, manager health promotions.

Pitman said about 50 percent of chronic diseases are caused by behavior, and having a variety of resources available makes it easier for NS employees and their families to pursue healthier behaviors.

"We want people to know they have the power to make changes that can help them lead longer, more fulfilling lives," Pitman said.

Pitman emphasized the confidentiality of all aspects of the WellNS program.

"All personal health information is handled by a third party, and no names are associated with any of the information NS receives. WellNS is not part of Norfolk Southern's medical department programs, in order to help ensure confidentiality," she said.

NS' WellNS program will focus on three initiatives in 2010: know your health, get active, and quit tobacco.

Know your health encourages NS employees to know their blood pressure, cholesterol levels, body mass index, and other screening numbers recommended by their doctors. These are basic numbers that can provide a baseline for understanding overall health and working with your doctor to make appropriate lifestyle changes if necessary.

"You can appear very healthy and not know that you have a developing condition," Pitman said. "These numbers will help you and your doctor work together to develop a plan to address any problems and possibly head off a serious illness."

NS employees will receive a birthday card reminding them of the importance of routine health screening by a medical professional. When employees have that doctor's assessment, they become eligible to enter a drawing for a WellNS prize.

The WellNS program will be sponsoring health screenings at various sites across the system.

"Not a replacement for an annual physical, our screenings provide a snapshot of your body mass index, blood pressure, and cholesterol," Pitman said. "These are important numbers for all of us to monitor as they can provide early warning signs of serious health problems. The results are confidential and strictly for your benefit."

Becoming more active may help prevent disease and help NS employees achieve new fitness levels. Pitman said the company has partnered with gyms in many locations that offer reduced prices for NS employees and their spouses. The company also provides discounts for Weight Watchers' meetings and online tools. The program is open to NS employees, their spouses, and domestic partners. Locally, employees are encouraged to engage the power of peers to create activity challenges and programs. The WellNS Web site features fitness information, videos, an activity tracker, and even a virtual trainer.

"We want to make it easier through our gym discounts, Weight Watchers programs, and online tools for employees to find a program that helps them reach a healthy weight or improve their fitness level," Pitman said. "The power of peers really encourages everyone to get involved, stay active, and have some fun while doing it."

NS' WellNS program will focus on three initiatives in 2010: know your health, get active, and quit tobacco.

■ **Mary Pitman**, manager health promotions

I've got the power

■ You've got the power to know your health, get active, and quit smoking.

Helping employees and their spouses quit tobacco use also is a priority in 2010 as NS rolls out a stricter smoking policy in July. Pitman said tobacco use is the number one preventable cause of disease and illness. Eliminating tobacco use reduces the risks of many serious diseases.

All NS medical plans provide over-the-counter medications for smoking cessation at no cost to employees. All plans cover prescription drugs – some at no cost to the employee.

Also available are personal coaches who have professional certifications in behavior modification, nutrition, weight management, fitness, back care, stress management, and tobacco cessation. Employees and spouses can sign up for this personal approach through the WellNS Web site.

"Our Web site is a great tool to find information specific to your readiness to make lifestyle changes," Pitman said. "Employees and spouses can access the site from any computer with Internet access. You can research health conditions, complete a health assessment, design a custom workout program, or request a coach. It is loaded with tools to help you make good health decisions."

For more information about NS' WellNS program, go to the NS Web site, click on Employees, then click on WellNS. ■ BizNS

The power of numbers: what they can tell you about your health

When it comes to good health, numbers can tell a story. Knowing your blood pressure, cholesterol, body mass index, and blood glucose level can help you stay on track for a healthier lifestyle.

"Taking the time to see your doctor and get a good sense of your overall health is the first step to maintaining or beginning a healthy lifestyle," said **Dr. Ray Prible**, Norfolk Southern's medical director. "Based on that assessment, you can set appropriate short- and long-term goals."

Prible said that type of assessment gives doctors a reference point for further evaluation and treatment.

"What you don't know can really hurt you, because many conditions have no symptoms," Prible said.

When numbers are approaching or are in an unhealthy range, it's a tip-off for developing certain chronic conditions.



"If your blood pressure is in the higher range and not treated, it can lead to heart disease and stroke," Prible said. "A high body mass index, if not reduced, can lead to diabetes, kidney disease, heart disease, and stroke. High cholesterol can lead to heart disease and stroke. Many of these conditions can be prevented when people know their numbers."

Having a regular checkup and knowing where you stand gives people the power to make changes, Prible said.

"Sometimes, diet and exercise are simpler ways to change your numbers to a more normal range," Prible said. "For example, cutting back on salt if your blood pressure is high can help. Being more active also can make a difference. These are smaller changes that can help people be more successful in achieving a healthier lifestyle. If more significant changes are needed, people can work with their doctor to decide what is most appropriate."

For those who might be concerned about having to see a doctor, Prible offers this advice.

"We know that some folks just don't want to deal with these issues, and that's generally out of fear," he said. "You have to figure out what's driving that fear and work to conquer it. Your relationship with your doctor should be a collaborative one, not an adversarial one. It gives you someone on your side to help you make positive changes."

Prible compared an annual physical examination to preventive maintenance on your vehicle.

"Most people make sure they have oil changes and regular maintenance performed on their vehicles so they don't break down and they last longer," he said. "It's kind of the same thing with your health. If you are aware of where you are and what you may have to do to make some changes, you may have a longer, more enjoyable life."

Prible said knowing your overall health and having a plan for short- and long-term goals has benefits beyond the obvious.

"When you know where you stand and what you may have to do to make some lifestyle changes and then make those changes, everyone in your circle benefits," Prible said. "You, your family, your fellow employees, and Norfolk Southern all win because you are more productive and work more safely." ■ BizNS

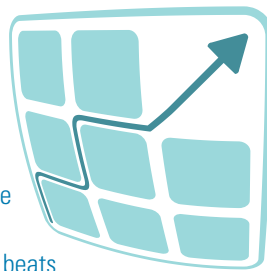
Important numbers you should know

Blood Pressure

Blood pressure numbers have two parts, systolic (the top number) and diastolic (the bottom number). Systolic is the pressure when the heart beats while pumping blood, and diastolic is the pressure when the heart is at rest between beats.

Normal: less than 120/80

Hypertension: 140/90 or higher



Cholesterol

Cholesterol is a waxy, fat-like substance that is found in all cells of the body. The body needs some cholesterol to work the right way, and it can make all it needs. HDL is considered good as it helps clean fat and cholesterol from arteries while LDL is considered bad as it can deposit cholesterol in your arteries and cause them to clog. Triglycerides are a type of fat found in the blood.

	Total	HDL	LDL	Triglycerides
Desirable:	less than 200	60 or higher	less than 100	less than 150
High:	240 or higher	less than 40	160 or higher	200 or higher

Blood Glucose

Your blood always has some glucose in it because your body needs glucose for energy to keep you going. Too much glucose in the blood isn't good for your health. Blood glucose goes up after eating, but one or two hours later it returns to the normal range.

After Fasting: Normal: less than 99

Diabetes: 126 or higher

Body Mass Index (BMI)

For adults, a healthy weight is defined as the appropriate weight in relation to height. This ratio of weight to height is an estimate known as the body mass index. The higher the BMI, the higher the risk of disease.

Normal weight: BMI = 18.5 to 24.9

Overweight: BMI = 25 to 29.9

Obese: BMI = 30 or higher

Calculate your BMI. Go to: <http://www.nhlbisupport.com/bmi/>



Get active and take action

Increasing physical activity and taking a more active role in maintaining health and fitness are big steps toward achieving a healthier lifestyle. Whatever your goal, from losing weight, becoming fitter, or running a marathon, stepping up activity is a good way to achieve health goals.

Norfolk Southern offers a number of incentives to help you get started, including discounts at gyms and a number of options for Weight Watchers on site and online.

Some employees have started their own activity programs.

In Atlanta, a group of walkers formed about five years ago when they were located at the Spring Street building. They would walk in the parking lot behind the building. That group has grown to more than 40, and with the move to the David R. Goode Building in Midtown Atlanta, they have an indoor area where they can walk as well.

"We walk around the second floor and around the building," said **Mae Green**, customer service representative. Green said the group operates as part of the safety committee's efforts. They log their miles at the beginning of each month. If they meet their individual goals, they are eligible for a quarterly prize such as a water bottle or pedometer. The group also has a quarterly breakfast that features speakers on health-related topics such as personal trainers or nutritionists.

In Norfolk, a group of walkers sets a brisk pace at lunchtime. **Steve Stasulis**, manager performance in Intermodal, keeps the group moving. They have three routes that take them through downtown Norfolk in a 45-minute session.

Walking isn't the only popular activity for employees. A group of Norfolk employees formed a team for Tour de Cure, a cycling event that benefits the American Diabetes Association. The first ride in 2006 involved four employees, according to then team captain **Karin Stamy**, general attorney. The team has grown over the years to nearly 60. Among the riders are CEO **Wick Moorman**, **Jim Hixon**, executive vice president law and corporate relations, **John Rathbone**, executive vice president administration, and

Mark Manion, executive vice president operations and chief operating officer.

On the Northern Region, a friendly competition among division officers and managers was called "Fluff to Buff." Each worked to lose some weight and achieve a higher fitness level.

Conway, Pa., terminal superintendent **Darnell Wood Sr.** was one of the biggest losers in the competition.

At Norfolk, Lamberts Point employees were not to be outdone. They had a fitness competition based on body mass index.

"All of these activities help NS employees lead healthier lives," said **Mary Pitman**, manager health promotions. "When people join together, there's a sense of camaraderie, accountability, and competition as well as just having a good time while improving their fitness levels." ■ BizNS

■ CEO Wick Moorman, left, is a member of the NS Tour de Cure team as is Mark Manion, right, executive vice president operations and chief operating officer.



Eating right, staying fit, and loving every minute of it

Dennis Turner started jogging with friends and doing aerobics in his late 20s to shed some unwanted pounds.

It wasn't until he reached his mid-40s, however, that he really got serious about his health. He was diagnosed with type 2 diabetes, a chronic and potentially life-threatening condition that affects how a person metabolizes sugar, the body's main fuel source. It is linked to being overweight.

In response, Turner quit smoking, started eating healthier, and ramped up his exercise routine to control his weight.

Now 61, Turner, NS manager benefits in Norfolk, doesn't jog anymore because of a bad disc in his back. Instead, he regularly walks, plays tennis, and is a serious bicyclist who belongs to the Norfolk Southern Tour de Cure team.

Through exercise and diet, Turner has maintained his blood sugar within normal range, without the need of medication, and has kept off the pounds.

Two winters ago, he became a member of an office Weight Watchers club organized by fellow NS employees in Human Resources. Since joining the club, he's lost around 30 pounds, he said. In addition to offering camaraderie and support of co-workers, Weight Watchers has helped him choose the healthy foods he needs to control his weight and boost his energy.

He keeps apples, bananas, and other fruit in his office to snack on during the day. Under his desk are boxes of instant oatmeal and cans of soup for lunch. He eats whole grain breads and avoids processed, fatty foods.

"I don't even think about eating french fries anymore," he said. "I live a very good life without them."



While diabetes provides an underlying motivation, Turner said it's easy to stay active because he's doing things he finds fun – such as the challenge of a 100-mile bicycle ride.

Turner's advice for staying fit: "Doing things you love is what it's all about. It's absolutely finding something you enjoy. From my standpoint, it's every day for the rest of my life." ■ BizNS

Dennis Turner quit smoking, started eating healthier, and ramped up his exercise routine to control his weight.

Family a big motivator for staying healthy

During the day, **Darnell Wood Sr.** finds ways to exercise.

Rather than riding the elevator, he takes two flights of stairs to his office in the Conway terminal administration building. Instead of hopping in a company car, he walks across the Pennsylvania rail yard, easily covering a mile on his weekly safety audits and to discuss safety with employees.

When he can, the Conway terminal superintendent joins the train and engine crews for their stretching and warm-up exercises.

At home, he cuts his lawn in summer with a push mower, a chore that takes about two hours, and he shovels snow in the winter. He says he's the only person on his block without a snow blower.

"Pushing a lawn mower and shoveling snow are other forms of exercise, and I save money at the same time," he said.

Besides keeping active, Wood watches his diet. He eats more salads and vegetables and less fatty fried foods.

In 2008, he lost 28 pounds over six months, finishing second place in the Northern Region's "Fluff to Buff" weight-loss challenge. The contest, held for the region's supervisors, was intended to promote wellness and encourage managers to set a good example for their employees.

"I've seen my stamina increase throughout the day," he said. "I'm not as tired as I used to be. I don't feel my body being drained late in the evening."

For Wood, 51, his motivation to stay fit is about family. He wants to be around when his two sons have children.

"My stepfather, who was a conductor at Roanoke Terminal, died of a stroke at 44, so I've already lived seven years longer than he did," Wood said. "As I get



older I see people dying of heart disease and cancer, and it just reminds me to be more health conscious. I wish I had been as aware in my younger years as I am now."

Wood is a big believer in getting regular medical checkups. "You're doing yourself, your family, and Norfolk Southern a disservice if you don't," he said. "Early detection on anything could extend your life."

He said he also continues to push some of his team members to quit smoking. "They take it in stride when I discuss my individual no-smoking campaign," he said.

He advises fellow employees to make an effort every day to exercise, even if it's just for a 10- or 20-minute walk.

"You can find time to do a lot of things, maybe by just getting up from your desk and walking down the hall and back," he said. "Getting into physical shape also helps you mentally. It may take changing some of your habits, and believe me I have, but if it's going to extend your life, go ahead and do it. It is a win-win."

■ BizNS

Have you crossed the line, or are you at risk for getting hooked?

Sometimes, we overdo things at social gatherings or even at home. And, sometimes, that can lead to severe consequences. Knowing where to draw the line is important.

Norfolk Southern's Drug and Alcohol Rehabilitation Services program provides help for employees and their families who believe they are addicted to alcohol or drugs or getting closer to crossing the line between social drinking and addiction.

The voluntary program began more than 35 years ago.

"We provide education on substance abuse with a base of information to an employee or family member so they can make responsible decisions concerning alcohol and drugs and to help prevent current chemical abuse behavior," said **Jack Scott**, manager DARS. "Sometimes, people don't realize that they've crossed the line between responsible behavior and addiction. We can help them make that distinction."

Scott said household surveys consistently show that 71 percent of substance abusers are employed – dispelling the misbelief that all affected abusers are dysfunctional.

There are signs that an individual might be in trouble, Scott said. They include: failure to meet obligations; irresponsible behavior; hazardous use such as driving under the influence; positive urinalysis; and inappropriate reaction to trauma or stress. Recurring signs of trouble include poor job performance, health problems, missed personal goals, and relationship difficulties leading to arguments about finances and job issues.

Aside from the personal costs of substance abuse, there are significant costs to NS. Accident rates increase, medical costs increase, and job performance decreases.

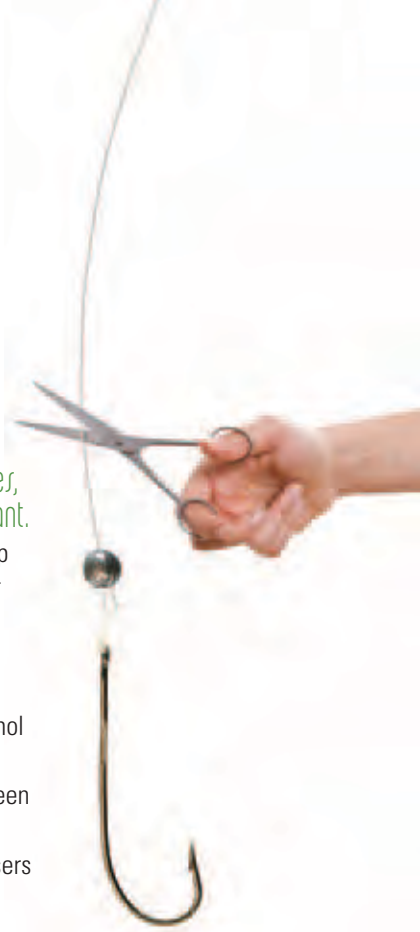
Absenteeism and disciplinary action increase. Then there is the problem of being present but not being attentive to the job at hand.

Scott said it costs \$50,000 to recruit, hire, and train new employees in train and engine service, so having resources available to treat substance abuse and dependence is an important factor in NS' success.

Counselors are located across the system and are available 24/7. They know firsthand what addiction can do to an individual and to families, because they themselves are recovering addicts.

"We want to give our employees who believe they need some help to overcome addiction or even prevent addiction as many resources as possible," Scott said. "That way, everyone wins."

For more information about DARS, go to the NS Web site, click on employees, then DARS. ■ BizNS



Hierarchy of alcohol abusers

(Lowest Risk) **Social:** 1-2 drinks 2x weekly

Binge: 5 or more drinks 1x in 30 days

Heavy: 5 or more drinks 5x in 30 days

(Highest risk) **Alcoholic:** loss of control

Health risks of alcohol

- Heavy drinkers use 4x longer hospital stays
- 25% more health benefit use overall
- Complicates existing problems or creates new ones
- Risk indicators include – hypertension, malnutrition, cardiac, and liver problems

Behavioral indicators of alcohol

- DUI indicates 2x the risk
- Emotional or physical abuse
- Fights
- Legal/financial/interpersonal problems
- 40% more accidents
- Smoking indicates 2x more risk

Health concerns of alcohol

- More deaths, illness, disabilities from substance abuse than any other preventable illness.
- 25% more medical cost
- 36% more hospitalizations
- 44% more mental problems



Counselors

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* = Microwave Number

**Norfolk Southern
Medical Services
1-800-552-2306**

Raising the roof on Heartland a major feat for railroading

One of the most amazing things about the Heartland Corridor tunnel clearance project is this: That Norfolk Southern even came up with a way to pull it off.

The business case was compelling. NS, aiming to capitalize on a shift in global shipping trends, wanted to increase rail capacity and accelerate delivery of international intermodal freight moving between East Coast port terminals and consumer-rich markets in the Midwest.

Actually getting the project done, however, has been akin to building an airplane while trying to fly it.

Without delaying or disrupting trains, NS set out to raise the height of 28 tunnels on the corridor, a gritty task of grinding and breaking out rock and concrete roofs or arches through nearly 5.5 miles of tunnels in Virginia, West Virginia, and a sliver of Kentucky. That meant getting track time to do the work while still meeting train schedules, over one of the railroad's busiest lines on the Pocahontas Division.

"That was probably the biggest hurdle out of the chute," said **Bob Billingsley**, NS director structural projects. "We had to find the time to do the work and not interfere with train schedules and the quality of service to our customers."

The tunnels range in length from the 3,302-foot Cowan to the 174-foot Big Four No. 2. In addition to the tunnel work, the project involved removing 25 overhead obstructions, including bridges, signal structures, and slide detector fences.

"When we were planning this people asked me, 'What can we compare it to?' and I said, 'Nothing, this is it,'" said **Jim Carter**, NS chief engineer bridges and structures. "It's a once-in-a-lifetime project for us. It's probably the single biggest engineering project taken on by any railroad in modern times."

Given that, it's remarkable the project has proceeded on schedule, with minimal delays to train traffic.

Just as significant, the Heartland Corridor has demonstrated the effectiveness of public-private partnerships in accelerating construction of critical railroad infrastructure projects, said **Rob Martinez**, NS vice president business development.

Public funds from the federal government, Virginia, and Ohio will cover around half of the estimated \$188 million needed for the overhead clearance project. Martinez, along with **Darrell Wilson**, assistant vice president government relations, helped lead NS' efforts to secure state and federal legislative support for the corridor improvements.

"From a cost perspective, it would have taken NS much longer to do this alone," Martinez said. "With the public participation that helped make this happen, we'll have jobs and economic development benefits that will accrue right away to Hampton Roads, Va., the central Ohio valley and, in the future, to the Roanoke Valley and West Virginia."



■ Contractors use an excavator, in top photo, to remove a boulder and other material while raising the elevation of the Cooper Tunnel. In middle photo, an Alpine roadheader mounted on a rail car grinds exposed rock inside the Hatfield Tunnel Main Two Track. At bottom, two excavators with roadheader attachments grind a notch in the concrete liner of Hemphill No. 1 Tunnel.

The real story: planning and teamwork

Construction on the corridor improvements began in June 2007. Two and a half years later, contractors hired by NS have finished 23 of the 28 tunnels. NS now anticipates wrapping up work by August, with completion of the final tunnel, the 2,627-foot-long Big Sandy 1, near Williamson, W.Va.

The success of the clearance project boils down to planning and teamwork, Carter said.

"To me, the real story of Heartland is the cooperation that's gone into this by everyone involved," he said. "I can't say enough good things about the transportation planning people in Atlanta who have facilitated this and the transportation folks on the Pocahontas and Virginia divisions who have executed it. The designers tailored their plans so the work could be done within a daily window of time, and the construction management team and the contractors have been committed to stay within that time frame. Their ability to do the work and then return the railroad to service every day safely and without unplanned interruptions has been remarkable."

Construction work was scheduled to accommodate two NS trains, 217 and 218, that haul freight for United Parcel Service. Keeping those trains running on time left a 10-hour work window of 2 a.m. to noon on the Pocahontas Division and 10 a.m. to 8 p.m. on the Virginia Division.

"UPS is one of the most service-sensitive intermodal customers that we have, and NS would have lost that freight if we hadn't built around it," said **Mike McClellan**, NS vice president intermodal and automotive marketing. "It's one thing to provide good service, but to provide premium service while we've been doing this project is a real testament to the construction schedules and the way the work has been done."

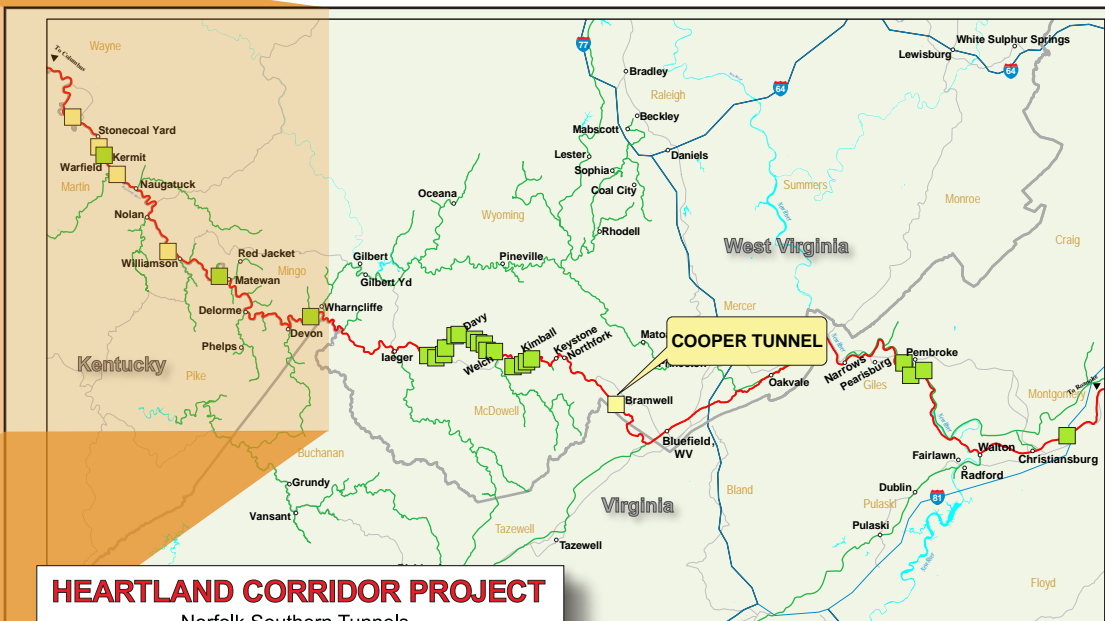


Coordinating with NS coal traffic was another challenge. When the project began, contractors worked a Saturday- to-Wednesday schedule to accommodate coal movement, which tends to get heavier later in the week. When coal demand began slacking off in late 2008 as the global recession settled in, construction shifted to a Monday-to-Friday schedule, which also saved NS weekend overtime pay for flagmen at construction sites.

As of late December, clearance work continued on five tunnels in West Virginia – the Big Sandy 1, 3, and 4, the Williamson, also known as Mingo, and the Cooper.

Most of the concrete-lined tunnels being raised were constructed in the early 1900s, but a few exposed rock tunnels were built prior to that.

The tunnel heights are being elevated an average of 1.5 feet to provide a clearance of 21 feet, giving double-stack trains a 9-inch safety margin. In some cases, contract construction crews have achieved that by grinding out the arched corners of tunnels, but in other instances, they've had to cut, grind, and break away concrete roof liners with diamond-tipped saws and excavators.



HEARTLAND CORRIDOR PROJECT
 Norfolk Southern Tunnels
 Requiring Modification for 20' 3" Doublestack Operation

Proposed Doublestack Route	Tunnel Restoration Complete (11/2009)
NS Rail System	Tunnel Restoration Incomplete (11/2009)
Interstate Highways	Mingo County Boundary Lines
State Highways	

■ The Heartland Corridor project is raising the height of 28 tunnels, shown on the map as green or yellow boxes, to allow double-stack trains to run the route. As of late December, work on all but five of the tunnels, shown in yellow, was complete.

Given the limited work window, the daily clearing activity in some of the tunnels has progressed in 15- to 20-foot sections. Before the track could be returned each day to the railroad to run trains through, the work crews had to secure the roof sections with some type of support.

"It's very tedious and time-consuming," Billingsley said.

NS forces follow behind the contract tunnel crews to replace track, ballast, and ties.

Dewey "D" Smith, director NS transportation service design, said careful planning paid off. "We formed one big team and gathered all the data we needed, including all the traffic data, the blocks, and the train schedules, and we modeled those using computer simulations," Smith said. "We looked at the traffic all the way down to each shipment on a train and how a 10-hour curfew would affect it.

"We found that if we had everyone on board and had the right discipline in place, we could perform the work and run all the trains without detouring or delaying them," he added. "So we developed a plan based on the simulations and we talked about them and tweaked them as needed."

Smith said NS' field transportation crews deserve a lot of credit. Among those involved were **Gary Shepard**, Pocahontas Division superintendent, and his field crews; **Haskel Stanback**, Virginia Division superintendent and his field people; **Alan Shaw**, then group vice president coal transportation and resources (now group vp chemicals), and the coal group; and McClellan's group. **Clark Cheng**, senior manager operations research, and **Wayne Mason**, senior director strategic planning, helped lead the computer modeling efforts.

"We had great tools and great people to work with," Smith said. "This was a sound plan, but we needed the people to step up and execute it. Everybody involved put in a lot of effort to make sure they operated and executed according to the plan, and that really is what has made it a success. Everybody played by the rules." ■ BizNS

NS readies for double-stack business over Heartland

During an October trade trip to meet with shipping customers based in Taiwan, Hong Kong, and Korea, Norfolk Southern intermodal executives didn't have to do anything special to promote the railroad's Heartland Corridor.



■ At left above, a crane at the Norfolk terminal moves a shipping container.

■ Pictured in photo at right is part of the new \$18 million on-dock rail facility built at Norfolk International Terminals in Norfolk, Va. Much of the intermodal traffic that will move over the Heartland Corridor to Midwest markets is off-loaded here.

Before they even brought up the subject, senior managers with these Asian ocean carriers were quizzing them for progress updates on the Heartland project, said **Jeff Heller**, NS group vice president international intermodal.

The corridor will provide these global shippers with a critical connection to population-rich consumer markets in the U.S. Midwest and beyond.

"There are a number of forces going on now driving more interest in the corridor, especially among our Asian customers," Heller said. "It's playing a major role in terms of their strategic plans for driving ships to the East Coast, and there clearly are external benefits for our customers. We'll be able to accommodate more tonnage, move it faster, and do it safer and without bottlenecks."

Factors working in NS' favor include the expansion of the Panama Canal and an ongoing shift of international container traffic from West Coast to East Coast ports. The canal project, scheduled for completion in 2014, will make it easier for big transport ships from Asia to call on port terminals in Hampton Roads, Va. – the Heartland's eastern anchor.

"It has become clear to us, especially on our recent trip to Asia, that everybody is looking ahead toward the Panama Canal expansion," said **Mike McClellan**, NS vice president intermodal and automotive marketing. "While NS will benefit the minute the Heartland is open, I'm not sure we'll be able to truly gauge the full impact until the canal is widened."

When Heartland improvements are completed this summer – including raising the clearance height of 28 tunnels – NS will haul double-stack container trains packed with import and export consumer goods between Virginia port terminals and Midwestern markets.

The corridor enhancements will double NS' freight capacity, shave about 225 route miles off each rail container shipment, and reduce transit times to and from inland intermodal facilities in Columbus, Ohio, and Chicago by up to a day and a half.



While the global recession reduced the volume of international container traffic over the past year, the Heartland project is positioning NS to take advantage of a surge in traffic when the economy recovers, Heller said. The improved high-capacity, high-velocity corridor will create a demand point for intermodal freight.

“Once we get beyond this dip in action, trade between the U.S. and the rest of the world is expected to pick up rapidly, and rail capacity will be king,” Heller said.

The East Coast began gaining share in Asian-based container traffic nearly a decade ago, spurred by congestion and labor issues at West Coast ports. By 2020, international container traffic moving through U.S. ports is projected to double, according to the U.S. Department of Transportation, and East Coast ports stand to be big winners, with container volume expected to triple.

“We can accommodate freight growth on the Heartland, and customers are going to want to sign longer term deals with us, which is good,” Heller said.

The increased speed, capacity, and reliability of NS’s Heartland Corridor will make the railroad that much more competitive.

NS’ primary customers in the international freight business are ocean steamship lines, including such Asian-based carriers as Yang Ming, Hanjin, COSCO, Hyundai, and OOCL. The carriers, after negotiating rail contracts, compete to transport freight for the world’s major manufacturers and retailers, such as Target

and Wal-Mart, said **Chris Luebbers**,

NS group manager international marketing. Those end-to-end deals cover the freight’s movement from Hong Kong to Chicago, for example.

“Some companies put more emphasis on cost and some more on service,” Luebbers said. “NS tends to attract lines that are more service-sensitive. They need a transit time that is fairly quick and is regular and consistent in delivering containers from Point A to Point B.”

The increased speed, capacity, and reliability of NS’ Heartland Corridor will make the railroad that much more competitive. Already, some carriers are positioning themselves at the Virginia port terminals, including making Norfolk, Va., their first port of call, Luebbers said.

That’s important for NS in terms of persuading carriers to drop off more inland bound freight in Norfolk and move it over the Heartland Corridor, he added.



■ Jeff Heller, NS group vice president international intermodal, says Heartland improvements are positioning the railroad to grow its business and take advantage of shifting global shipping trends.

A marketing official at Virginia International Terminals, a private nonprofit company that operates the state-owned ports, said an improved Heartland Corridor is a good selling point to attract shipping lines.

"Virtually every ship line that I meet with is aware of the Heartland Corridor and is looking forward to the new capacity and better service that will occur," said **Tom Capozzi**, VIT's senior managing director global sales. "There's clearly a perception among the ship line community that, between the port's ability to handle the larger ships and the investments on land to improve rail infrastructure, Norfolk is basically the place for the future to serve the Midwest."

In the past year, VIT has invested around \$18 million to construct a new on-dock rail facility at

Norfolk International Terminals to "marry up" with NS' corridor improvements and the expected increase in rail cargo through the port, Capozzi said.

"We've been partners with Norfolk Southern for years, and I think we've got a bright future together," he added.

An NS intermodal train pulling out of Norfolk International Terminals and running over the Heartland will typically have blocks of container cars bound for Columbus, Cleveland, Chicago, and Detroit. At rail yards along the way, the train is divided up, and cars routed to their final destinations.

In addition to track and tunnel clearance improvements, NS' investment in intermodal terminal facilities is a major piece of the corridor project. The Rickenbacker facility in Columbus, which began operating in 2008, and new terminals built over the last several years in Detroit and Cleveland all are designed to enhance customer service and safety.

"Because of the efficiencies we're creating, it's a win for NS, our customers, and the communities we serve," Heller said. "On the train economics side, we're turning the equipment and moving the boxes faster, we're burning less fuel, and we're carrying twice as much freight. We can offer customers a higher level of service, and our communities get the spin-off benefits of more jobs and economic development opportunities."

McClellan said Heartland dovetails with NS' strategy to shift freight from low-capacity, single-track lines onto high-density, high-capacity lines. Heartland's double-stack route, for example, will remove a lot of freight off lines running between Bristol, Va., and Knoxville, Tenn., and between Lynchburg, Va., and Hagerstown, Md.

Ultimately, McClellan said, that will free up capacity on those lines to support NS' Crescent Corridor, a 2,500-mile network that primarily will serve domestic intermodal freight moving from New Orleans and Memphis, Tenn., to markets in the Northeast.

The Heartland Corridor also opens potential markets between the Carolinas and the Midwest, McClellan said.

"Historically, we've run that freight over Atlanta, which has a transit time that's way too long, even though it's the lowest-cost route," he said. "When we can double-stack Heartland, we will provide a faster service and also the lowest cost way to connect the Carolinas and the Midwest. That creates some very interesting opportunities for NS.

"Once we open up the corridor," he added, "I think we'll all say, 'How did we ever live without this?'" ■ BizNS

"We can offer customers a higher level of service, and our communities get the spin-off benefits of more jobs and economic development opportunities."

Jeff Heller,
NS group vice president
international intermodal

Track 2012 on the move

NS remote control locomotives enhance yard safety, efficiency

Across Norfolk Southern's rail terminals, Enola Yard consistently ranks at or near the top in on-time performance and train connections.

That's largely a result of the dedication and work culture that Enola's trainmasters, yardmasters, and yard crews bring to the job, says **Jeff Moore**, terminal superintendent. Moore, however, points to another reason for the efficiency – remote control locomotives, known as RCL.

Enola started using RCL seven years ago. Now, all but two of the Pennsylvania yard's switching crews use remote control to disassemble incoming trains and make up outbound trains to deliver freight to customers.

It's all done by operators on the ground outfitted with a remote-control device that transmits commands via radio signal to a computer onboard yard switcher locomotives.

"We use RCL more than any other yard, and Enola was the first to go completely remote on the hump yard operation," Moore said. "Not only does it complement safety, it's very productive, and these folks around here are very good at it."

Safety and productivity are why NS adopted remote control technology as one of the railroad's Track 2012 initiatives, said **John Irwin**, NS assistant vice president transportation network. NS launched the five-year 2012 strategic plan to significantly improve all aspects of the company's business.

NS began implementing RCL in 2002 after the Federal Railroad Administration issued guidelines for Class 1 railroads. For years before that, railroads in Canada made extensive use of RCL, which coincided with a significant reduction of injuries and accidents, Irwin said.

"The main reason we're doing it – first and foremost – and the reason all the Class 1 railroads embarked on RCL is that it adds another level of safety to yard operations," Irwin said. "The RCL system doesn't rely on hand signals or voice commands that can be misinterpreted or not seen or heard. A conductor, who is down there on the ground where the work is being performed, is telling the locomotive what to do via this control device. That one step in the communications process makes the operation safer."



■ Pictured at top is a locomotive at Lamberts Point in Norfolk, one of the latest NS yards to adopt remote control locomotive technology. Lamberts Point uses RCL to pull coal cars out of its empty yard.

■ With a preprogrammed coupling speed of 1 mph, the RCL system makes "a perfect coupling every time," says Gary Petrewicz, a yard conductor at NS' Enola Yard.



For NS customers, all that translates into less likelihood of freight damage or shipping delays, Irwin said.

NS has equipped 185 yard locomotives across the system with an RCL onboard microprocessor. About 15 percent of NS' yard crews now use remote control, and plans call for expanding

use of the technology over time, Irwin said. Not all yards are well suited for RCL, he added, such as those where the track gradient is too severe.

Lamberts Point in Norfolk became one of the latest yards to add RCL. Since late summer, crews have used the remote technology to pull coal cars out of the facility's empty yard to make up outbound trains.

Darryl Norris, an NS road foreman of engines at the Norfolk terminal, is training employees on how to use the RCL control device, known as the Operator Control Unit, or OCU. Norris said he is impressed with the safety of operations with RCL, such as coupling cars.



■ In photo at left, Tiffany Futato, a yard foreman at NS' Conway, Pa., terminal, wears an operator control unit, having recently completed training to qualify as an RCL operator. Early this year, Conway became the last NS hump yard to begin using RCL technology, said Darnell Wood, terminal superintendent.

■ At top is the operator control unit, which clips onto a strap and is worn over the shoulders, much like a camera. An antenna on the OCU transmits commands via radio signal to a computer processor onboard a locomotive.

“The employee who’s actually making the coupling is controlling the movement of the engine and is right there at the coupling,” Norris said. “The employee is not having to radio somebody on the locomotive 50 to 60 cars away and asking him to back up.”

Lamberts Point now is running one shift in the empty yard using RCL, but eventually plans to train enough employees to make the operation completely remote.

“It’s still new and evolving for us, but once folks get acclimated to it, I think it’s going to work out well,” Norris said.

At Enola, there have been zero injuries attributable to RCL, said **Gary Petrewicz**, a yard conductor who also teaches NS employees how to operate the OCU device. In the yard, Petrewicz goes by the radio handle RC-1.

The ergonomically designed unit, weighing less than four pounds, is worn on a strap and is easy to reach.

“Everything is right at your fingertips,” said Petrewicz, a 35-year railroad veteran and a local chairman of the United Transportation Union. “I’m looking directly at what I’m doing, and the locomotive does exactly what I command it to do. I tell it to go 4 mph, it simply goes 4 mph. I tell it to go couple, it couples – it’s quick, efficient, and very safe.”

The control units and onboard locomotive computers have built-in features to make the operation safe. The remote locomotives used at Enola Yard are programmed to go no faster than 10 mph. An operator can ramp up the speed gradually at intervals of 3 mph, starting at a pre-programmed coupling speed of 1 mph.

“There’s a perfect coupling every time – there’s no crashing into things,” said Petrewicz.

In another safety feature, the system will not permit the locomotive to shift into reverse unless it has come to a complete stop. Besides adding safety, this feature prevents damage that otherwise could occur to a locomotive’s traction motors.

There’s also a “tilt” feature on the OCU that will cause a locomotive to stop if an operator falls down or bends lower than 45 degrees for more than a few seconds – unless the operator pushes a switch to extend the time allowed.

All of the controls on the OCU work off LED lights, making it easy to use for night operations.

To further enhance safety in yards using RCL, the company has installed electronic transponders along certain sections of track that will automatically stop a locomotive if an OCU operator mistakenly fails to do so.

Employees involved in RCL go through a minimum of 80 hours training, including in the classroom, in the field, and on the job. Most operators master the system after using the OCU for about a week, Petrewicz said.

“I tell all the employees that it’s direct mind control,” he said. “There’s no guess work. It’s doing exactly what you want it to do.” ■ BizNS

*“The employee who’s actually making the coupling is controlling the movement of the engine and is right there at the coupling,” said **Darryl Norris**. “The employee is not having to radio somebody on the locomotive 50 to 60 cars away and asking him to back up.”*



ON THE COVER:

Calling all couch potatoes! The New Year inspires many people to make all kinds of resolutions, including improving health and fitness. Sticking to them can be a challenge. Norfolk Southern's WellNS program offers many tools and options to keep NS employees and their families on track for a healthier lifestyle.

BizNS presents an in-depth look at the challenges and opportunities Norfolk Southern faces. It is produced by the Corporate Communications Department.

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Norfolk Southern's sustainability logo

NS joins U.S. Green Building Council Railroad is industry leader in promoting energy efficiency and sustainability

Norfolk Southern has joined the U.S. Green Building Council, a nonprofit membership-based organization committed to a prosperous and sustainable future for

the nation through cost-efficient and energy-saving green buildings.

Through its latest public-private partnership initiative, the Crescent Corridor, NS will capitalize on the inherent efficiencies of rail transportation to substantially reduce fuel consumption and greenhouse gas emissions. As part of the Crescent Corridor program, NS has committed to submitting buildings from three of its proposed intermodal terminals in Birmingham, Ala., Greencastle, Pa., and Memphis, Tenn., for LEED – Leadership in Energy and Environmental Design Certification.

Norfolk Southern is USGBC's first Class I railroad member.

The LEED certification system rewards current best practices and provides an outline for buildings to use less energy, water, and natural resources while improving the indoor environment – with the goal of maximizing operational efficiency while minimizing environmental impacts. The process for obtaining LEED certification is based on accumulating points in five areas: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. NS actively has been incorporating LEED standards into its building and planning designs and is committed to achieving these standards.

Norfolk Southern also is implementing sustainable operations throughout its facilities, including the use of the state-of-the-art low emission cranes and tractors that will reduce the particulate emissions by 90 percent and nitrogen oxide emissions by 45 percent. NS is experimenting with new methods to reduce truck idling, and implementing improved strategies for reducing electricity usage at all of its facilities as well. ■ BizNS

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